AMENDMENTS TO THE CLAIMS

LISTING OF CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method comprising:

(a) exposing a known phage library to a ~~target~~ surface of a material having a flat surface, wherein each phage of at least a portion of the known phage library displays a different exogenous peptide sequence on a surface of the phage,

(b) incubating the known phage library to produce bound phages that are bound to the ~~target~~ surface,

(c) removing the bound phages,

(d) repeating steps (a) to (c) for a plurality of times,

(e) isolating and sequencing individual clones after performing step (d),

(f) identifying a DNA sequence encoding a peptide that demonstrates specific binding to the flat surface,

(g) synthesizing the identified peptide, ~~and~~

(h) confirming the identified peptide's binding specificity; and

(i) fabricating a biosensor having a flat substrate surface and peptides identified by step (f).

2. (Canceled)

3. (Canceled).

4. (Currently amended) The method of claim 1, wherein the ~~target~~ surface is hydrophobic.

5. (Previously Presented) The method of claim 1, wherein step (d) is repeated at least three times.

6. (Previously Presented) The method of claim 5, wherein during each successive round of step (d), reaction conditions are more stringent than in a prior round.

7. (Previously Presented) The method of claim 1, further comprising amplifying the bound phages.

8-9. (Cancelled)

10. (Currently amended) The method of claim 1, wherein the ~~target~~ surface is a substrate for scanning probe microscopy.

11. (Currently amended) The method of claim 1, wherein the ~~target~~ surface comprises graphite.

12. (Currently amended) The method of claim 11, wherein the ~~target~~ surface

comprises highly ordered pyrolytic graphite.

13-14. (Cancelled)

15. (Currently amended) The method of claim 1, wherein the ~~target~~ flat surface is ~~flat,~~ smooth, or curved, and wherein the ~~target~~ surface comprises boron nitrate, lead sulfide, zinc selenide, cadmium selenide, cadmium sulfide, gallium arsenide, aluminum arsenide, zinc sulfide, gallium nitrate, indium phosphate, or gallium arsenide.

16. (Currently amended) The method of claim 1, wherein the ~~target~~ surface comprises mica, silicon, or annealed gold.

17. (Currently amended) The method of claim 1, wherein the ~~target~~ surface comprises Teflon.

18. (Previously Presented) The method of claim 1, comprising determining amino acid sequences which comprise the exogenous peptide.

19. (Canceled)

20-36. (Canceled).

37. (Previously Presented) The method of claim 1, comprising removing an unbound phage prior to removing the bound phages.

38. (Currently amended) The method of claim 1, wherein the ~~target~~ surface comprises a surfactant.

39. (Currently amended) The method of claim 1, wherein said isolating and sequencing individual clones comprises identifying one or more desired feature of the peptide present in every evolution of repeating steps (a) to (c) and wherein the one or more desired ~~elements~~feature present in every evolution of repeating steps (a) to (c) are present differently.

40. (New) A method comprising:

(a) exposing a known phage library to a surface of a material having a flat surface, wherein each phage of at least a portion of the known phage library displays a different exogenous peptide sequence on a surface of the phage;

(b) incubating the known phage library to produce bound phages that are bound to the surface;

(c) removing the bound phages;

(d) repeating steps (a) to (c) for a plurality of times;

(e) isolating and sequencing individual clones after performing step (d);

(f) identifying a DNA sequence encoding a peptide that demonstrates specific binding to the flat surface;

(g) synthesizing the identified peptide;

(h) confirming the identified peptide's binding specificity; and

(i) associating a biomolecule with the identified peptide of step (g),

wherein a nanocode is bound to the biomolecule.

41. (New) The method of claim 40, wherein the nanocode includes one or more submicrometer metallic barcodes, carbon nanotubes, or fullerenes.

42. (New) The method of claim 40, wherein nanocode the two or more moieties attached to each other.

43. (New) The method of claim 40, further comprising performing a method selected from the group consisting of polynucleotide sequencing, immunoassaying, single nucleotide polymorphism (SNP) detection, specific genotype detection, ligand binding, and personal ID and security protocols.